REMARKS

A. Introduction

Claims 1-4 and 6-11 were pending and under consideration in the application.

In the Office Action of November 12, 2008 claims 1-3, 6, and 8-11 were rejected as being anticipated by Kleinfelder, ISCC 2002/Session 6/ CMOS IMAGE SENSORS WITH EMBEDDED PROCESSORS/6.1 "A 10k frame/s 0.18 μm CMOS Digital Pixel Sensor with Pixel-Level Memory" (hereinafter, "*Kleinfedder*").

Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Kleinfedder* in view of Gowda, et al., U.S. 6,275,259 (hereinafter, "*Gowda*").

Claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Kleinfedder* in view of Bell, et al., US 7,106,372 (hereinafter, "*Bell*").

B. Rejections under 35 U.S.C. 102(b)

Claims 1-3, 6, and 8-11 were rejected as being anticipated by *Kleinfedder*.

Kleinfedder discloses a digital pixel sensor (DPS) array wherein each pixel has an analog-digital convertor (ADC) and digital data is directly read out of the sensor array. *Kleinfedder*, Paragraph 1. A similar approach is discussed as background art in paragraphs 0013, 0017, and Figure 6 (elements 200A) of the instant application (Paragraph numbers are with respect to the application as published as US 2006/0103748).

Kleinfedder fails to teach or suggest a pixel-array scanning circuit that scans a pixel array to read **analog** signals from the individual pixels to an AD (analog to digital) memory consisting of a plurality of unit memories in a two-dimensional array corresponding to a pixel arrangement in the pixel array for storing the analog signals, each unit memory including an analog to digital converter circuit, as recited in independent claim 1. Neither does *Kleinfedder* teach or suggest an

AD memory for storing analog signals read from a pixel array and carrying out AD conversion on said analog signals, the AD memory comprising a plurality of unit memories in a two-dimensional array corresponding to a pixel arrangement in the pixel array as recited in independent claim 9.

The Office Action asserted at pages 2-3 that Figure 6.1.1 and paragraph 5 of *Kleinfedder* discloses reading analog signals from the individual pixels to an AD memory. The assertion is not supported by the actual disclosure of the reference. Figure 6.1.1 shows that each pixel includes a photogate (PG) circuit, a comparator and an 8-bit memory. The digital code output of pixel level comparator (of the ADC) is latched into pixel-level (8-bit) memory (paragraph 5) after which it is read out of the memory one row at a time (paragraph 7). Thus, only **digital** data is read from the pixels.

Kleinfedder, if anything, teaches **away** from the present invention, wherein a pixel-array scanning circuit scans a pixel array to read **analog** signals from the individual pixels to an AD (analog to digital) memory consisting of a plurality of unit memories in a two-dimensional array corresponding to a pixel arrangement in the pixel array for storing said analog signals, each unit memory including an analog to digital converter circuit.

A finding that a claim is anticipated requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F. 2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Because *Kleinfedder* fails to disclose at least the features of the claims discussed above, claims 1 and 9, and their respective dependent claims are patentable over *Kleinfedder*.

C. Rejections under 35 U.S.C. 103(a)

1. Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Kleinfedder* in view of *Gowda*.

Claim 4 depends from claim 1, and is patentable over the combination of *Kleinfedder* and

Gowda for at least the same reasons as claim 1. *Gowda* is cited for disclosing an image sensor where pixels correspond to ADC in a variety of relationships. Whether or not this is true, the disclosure fails to cure the deficiency noted above.

2. Claim 7 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Kleinfedder* in view of *Bell*.

Claim 7 depends from claim 1 and is patentable over the combination of *Kleinfedder* and *Bell* for at least the same reasons as claim 1. *Bell* is cited for disclosing reading pixels from a pixel array on a row by row basis. Whether or not this is true, the disclosure fails to cure the deficiency noted above.

D. Conclusion

In view of the foregoing, it is submitted that claims 1-4 and 6-11 are allowable and that the application is in condition for allowance. Early notice to that effect is respectfully requested.

If the Examiner believes that, for any reason, direct contact with Applicant's attorney would help advance the prosecution of this case to finality, the Examiner is invited to telephone the undersigned at the number given below, for purposes of arranging for a telephonic interview. Any communication initiated by this paragraph should be deemed an Applicant-Initiated Interview.

If any further fees are required in connection with the filing of this amendment, please charge the same to out Deposit Account No. 19-3140.

Respectfully submitted,

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